

=> FILE REG

FILE 'REGISTRY' ENTERED AT 16:00:33 ON 06 AUG 2004  
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STRUCTURE FILE UPDATES: 4 AUG 2004 HIGHEST RN 722454-60-6  
DICTIONARY FILE UPDATES: 4 AUG 2004 HIGHEST RN 722454-60-6

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:  
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=> FILE HCAPLU

FILE 'HCAPLUS' ENTERED AT 16:00:40 ON 06 AUG 2004  
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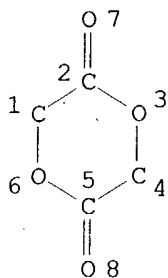
FILE COVERS 1907 - 6 Aug 2004 VOL 141 ISS 6  
FILE LAST UPDATED: 4 Aug 2004 (20040804/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> D QUE

L15 STR

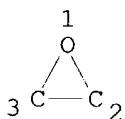
*structure 1*



NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 8

STEREO ATTRIBUTES: NONE  
 L16 STR 2



*217 polymers from structure 1 and 2 query*

NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RSPEC I  
 NUMBER OF NODES IS 3

STEREO ATTRIBUTES: NONE  
 L17 STR

Cb^Ak^Cb  
 1 2 3

*← Subset search with this query*

NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 3

STEREO ATTRIBUTES: NONE  
 L19 SCR 2043

L22 217 SEA FILE=REGISTRY SSS FUL L15 AND L16 AND L19  
 L24 7 SEA FILE=REGISTRY SUB=L22 SSS FUL L17  
 L26 5 SEA FILE=HCAPLUS ABB=ON L24

*7 polymers*

*5 CA references*

=> D L26 ALL 1-5 HITSTR

L26 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2003:946275 HCAPLUS  
 DN 140:146610  
 ED Entered STN: 05 Dec 2003  
 TI Terpolymers from Lactide and Bisphenol A Derivatives: Introducing Renewable Resource Monomers into Commodity Thermoplastics *applicant*  
 AU Abayasinghe, Nilmini K.; Smith, Dennis W., Jr.  
 CS Department of Chemistry and Center for Advanced Engineering Fibers and Films, Clemson University, Clemson, SC, 29634, USA  
 SO Macromolecules (2003), 36(26), 9681-9683  
 CODEN: MAMOBX; ISSN: 0024-9297  
 PB American Chemical Society  
 DT Journal  
 LA English  
 CC 35-7 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 37  
 AB Here we report the first synthesis of terpolymers of L-lactide (LA), with commodity monomers such as 4,4'-hexafluoroisopropylidenediphenol (6F-Bis-A) and the diglycidyl ether of bisphenol A (DGEBA) using metal halide-crown ether complexes. Terpolymn. of LA, 6F-Bis-A, and DGEBA gave novel high mol. weight poly(ester hydroxy ether)s containing isolated lactide units. This method may be applicable to the development of new commodity thermoplastics containing a significant content of renewable resource material.  
 ST lactide hexafluoroisopropylidenediphenol bisphenol A diglycidyl ether copolymn  
 IT Polyethers, preparation  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (epoxy-polyester-, fluorine-containing; terpolymers from lactide and bisphenol A derivs.)  
 IT Polyethers, preparation  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (epoxy-polyester-; terpolymers from lactide and bisphenol A derivs.)  
 IT Fluoropolymers, preparation  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (epoxy-polyester-polyether-; terpolymers from lactide and bisphenol A derivs.)  
 IT Polyesters, preparation  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (epoxy-polyether-, fluorine-containing; terpolymers from lactide and bisphenol A derivs.)  
 IT Polyesters, preparation  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (epoxy-polyether-; terpolymers from lactide and bisphenol A derivs.)  
 IT Fluoropolymers, preparation  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (epoxy; terpolymers from lactide and bisphenol A derivs.)  
 IT Epoxy resins, preparation  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (fluorine-containing; terpolymers from lactide and bisphenol A derivs.)  
 IT Glass transition temperature  
 Polymer chains  
 (of terpolymers from lactide and bisphenol A derivs.)  
 IT Solvent effect  
 (on terpolymers from lactide and bisphenol A derivs.)  
 IT Epoxy resins, preparation  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (polyester-polyether-, fluorine-containing; terpolymers from lactide and

bisphenol A derivs.)

IT Epoxy resins, preparation  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (polyester-polyether-; terpolymers from lactide and bisphenol A  
 derivs.)

IT Polymerization  
 (solution; terpolymers from lactide and bisphenol A derivs.)

IT 770-35-4, 1-Phenoxy-2-propanol  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (Dowanol; solvent effect on synthesis of terpolymers from lactide and  
 bisphenol A derivs.)

IT 4511-42-6, L-Lactide  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (in attempted copolymn with hexafluoroisopropylidenediphenol)

IT 1478-61-1, 4,4'-Hexafluoroisopropylidenediphenol  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (in attempted copolymn with L-lactide)

IT 97-64-3, Ethyl lactate 108-88-3, Toluene, uses 111-96-6, Diglyme  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (solvent effect on synthesis of terpolymers from lactide and bisphenol  
 A derivs.)

IT 7447-40-7, Potassium chloride, uses 17455-13-9, 18-Crown-6  
 RL: CAT (Catalyst use); USES (Uses)  
 (terpolymers from lactide and bisphenol A derivs.)

IT **651031-63-9P 651031-64-0P 651031-65-1P**  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (terpolymers from lactide and bisphenol A derivs.)

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Albertsson, A; Acta Polym 1995, V46, P114 HCAPLUS
- (2) Anderson, K; J Appl Polym Sci 2003, V89, P3757 HCAPLUS
- (3) Anon; [http://www.oit.doe.gov/agriculture/pdfs/technology\\_roadmap.pdf](http://www.oit.doe.gov/agriculture/pdfs/technology_roadmap.pdf)
- (4) Aubrecht, K; Macromolecules 2002, V35, P644 HCAPLUS
- (5) Chamberlain, B; Macromolecules 1999, V32, P2400 HCAPLUS
- (6) Drumright, R; Adv Mater 2000, V12, P1841 HCAPLUS
- (7) Frick, M; Biomacromolecules 2003, V4, P216
- (8) Gross, R; Science 2002, V297, P803 HCAPLUS
- (9) Lindblad, M; Adv Polym Sci 2002, V157, P139 HCAPLUS
- (10) Nishikubo, T; J Polym Sci, Part A: Polym Chem 1989, V27, P1975 HCAPLUS
- (11) Nishikubo, T; Prog Polym Sci 1993, V18, P963 HCAPLUS
- (12) Ovitt, T; J Am Chem Soc 1999, V121, P4072 HCAPLUS
- (13) O'Keefe, B; J Am Chem Soc 2002, V124, P4384 HCAPLUS
- (14) Pasquale, A; Macromolecules 2001, V34, P8064 HCAPLUS
- (15) Radano, C; J Am Chem Soc 2000, V122, P1552 HCAPLUS
- (16) Westervelt, R; Chem Week 2000, V162, P9
- (17) Yashiro, T; Macromolecules 2001, V34, P3205 HCAPLUS

IT **651031-63-9P 651031-65-1P**  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (terpolymers from lactide and bisphenol A derivs.)

RN 651031-63-9 HCAPLUS

CN 1,4-Dioxane-2,5-dione, 3,6-dimethyl-, (3S,6S)-, polymer with  
 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane] and  
 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[phenol] (9CI) (CA  
 INDEX NAME)

CM 1

CRN 4511-42-6

CMF C6 H8 O4